

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (currently amended) A method of inserting a plurality of entries into an index keyed by multidimensional data, comprising:

selecting subsets of the index that overlap if the entries are inserted into the subsets of the index;

inserting the entries within the subsets of the index; and

reorganizing the subsets of the index with the inserted entries [[.]] ,wherein said

reorganizing includes reorganizing such that an amount of overlap of bounding boxes for objects in a strict subset of the index is reduced.

2. (canceled)

3. (original) A method according to claim 1, wherein:

the entries include spatial data; and

the index keyed by multidimensional data includes a spatial index.

4. (original) A method according to claim 1, wherein the subset include sibling nodes of an R-Tree index.

5. (cancelled)

6. (currently amended) A method of inserting a plurality of entries into a spatial index, comprising:

selecting at least two and less than all children of a node in the spatial index  $[[;]]$  ,

wherein the selected children include objects distributed within;

distributing the entries within the selected children; and

reorganizing the objects distributed within the selected children.

7. (original) A method according to claim 6, wherein said reorganizing includes reorganizing such that an amount of overlap of bounding boxes for objects in the spatial index is reduced.

8. (original) A method according to claim 7, wherein one of the bounding boxes includes a minimum bounding rectangle (MBR).

9. (original) A method according to claim 6, wherein at least two of the selected children have respective bounding boxes that overlap with one another.

10. (original) A method according to claim 6, wherein said selecting includes selecting exactly two of the children.

11. (original) A method according to claim 10, wherein the exactly two of the children have respective bounding boxes that overlap with one another.

12. (currently amended) A method according to claim 6, wherein the ~~object~~ objects distributed among the ~~selecting~~ selected children include the entries.

13. (cancelled)

14. (currently amended) A method of inserting a plurality of entries into a multidimensional-keyed index organized as an R-Tree, comprising:

associating a node in the R-tree with a buddy node that is a sibling of the node;  
clustering children of the node and the children of the buddy;  
partitioning the clustered children and the entries into a plurality of groups, wherein at least one of the groups includes a child node of the cluster node, a buddy child node associated the child node, and one or more of the entries; ~~and~~ , said partition is performed so that overlap among bounding boxes associated with the groups is reduced; and  
inserting said one or more of the entries among the child node and the buddy child node associated the child node.

15. (original) A method according to claim 14, wherein:

each node of the R-tree is associated with a respective bounding box; and  
a first bounding box associated with the child node overlaps a second bounding box associated with the buddy child node.

16. (cancelled)

17. (cancelled)

18. (new) A tangible computer-readable medium bearing instructions for inserting a plurality of entries into an index keyed by multidimensional data, said instructions arranged, upon execution by at least one processor, to perform the steps of:

- selecting subsets of the index that overlap if the entries are inserted into the subsets of the index;
- inserting the entries within the subsets of the index; and
- reorganizing the subsets of the index with the inserted entries, wherein said reorganizing includes reorganizing such that an amount of overlap of bounding boxes for objects in a strict subset of the index is reduced.

19. (new) A tangible computer-readable medium bearing instructions for inserting a plurality of entries into a spatial index, said instructions arranged, upon execution by at least one processor, to perform the steps of:

- selecting at least two and less than all children of a node in the spatial index, wherein the selected children include objects distributed within;
- distributing the entries within the selected children; and
- reorganizing the subsets of the index with the inserted entries, wherein said reorganizing includes reorganizing such that an amount of overlap of bounding boxes for objects in a strict subset of the index is reduced.

20. (new) A tangible computer-readable medium bearing instructions for inserting a plurality of entries into a multidimensional-keyed index organized as an R-Tree, said instructions arranged, upon execution by at least one processor, to perform the steps of:

associating a node in the R-tree with a buddy node that is a sibling of the node;

clustering children of the node and the children of the buddy;

partitioning the clustered children and the entries into a plurality of groups, wherein at

least one of the groups includes a child node of the cluster node, a buddy child node

associated the child node, and one or more of the entries, said partition is performed

so that overlap among bounding boxes associated with the groups is reduced; and

inserting said one or more of the entries among the child node and the buddy child node

associated the child node.